

CLAIMS:

1. A lock engaging-and-disengaging mechanism, comprising:

a driving tube comprising at least one tapering hole/recess on an inner wall of said driving tube;

5 a key driven tube for flexibly installation to an inner tube portion of said driving tube, said key driven tube comprising at least one hole on a wall of the key driven tube;

a sideway component for installation in the at least one hole on the key driven tube, said sideway component being adaptable for engaging with or disengaging from the tapering hole on the driving tube;

10 an axially sliding component for installation into the key driven tube, said axially sliding component comprising a non-axial slot;

a rotatable component for insertion into said axially sliding component, said rotatable component comprising a pin extending into the non-axial slot of said axially sliding component;

15 whereby by rotating the rotatable component, the pin of said rotatable component is operated together with the non-axial slot of axially sliding component, so as to axially move the axially sliding component, thereby activating the movement of the sideway component installed in said key driven tube.

2. A lock engaging-and-disengaging mechanism, comprising:

a driving tube shaped into a hollow tubular body and comprising a first end and a second end, said first end being received in a lock mechanism, and said second end being connected to a handle, and comprising at least one tapering hole on an inner wall 5 of said driving tube;

a key driven tube shaped into a hollow tubular body comprising a first end and a second end, said key driven tube being flexibly installed to an inner tube portion of the first end of said driving tube, wherein a wall of said key driven tube is formed with at least one hole;

10 a sideway component for installation in said at least one hole of said key driven tube, said sideway component being either engaged with or disengaged from the tapering hole/recess of said driving tube;

15 an axially sliding component for insertion in the first end of said key driven tube, said axially sliding component comprising a first end, a second end, and a non-axial slot between said first end and said second end of the axially sliding component, wherein the sideway component is adjacent said first end of said axially sliding component;

20 a rotatable component for insertion in said axially sliding component, said rotatable component comprises a first end, a second end, and a pin between said first end and said second end said pin being adaptable to extend into the non-axial slot of said axially sliding component ;

25 whereby by rotating the rotatable component, the pin of said rotatable component is operated together with the non-axial slot of said axially sliding component, so as to axially move the axially sliding component between a first position and a second position; such that when said axially sliding component is moved to the first position, the hole on said key driven tube is in alignment with the tapering hole on said driving tube, and that when said key driven tube is rotated by said driving tube, said sideway component is disengaged from the tapering hole of said driving tube, such that said key driven tube is disengaged from said driving tube;

30 and when said axially sliding component is moved to said second position, said sideway component is shifted into the hole of said key driven tube and the tapering hole of said driving hole, with an outer peripheral wall of said first end of said axially sliding component, said key driven tube and said driving tube being engaged with each other, such that said key driven tube is rotatable by rotation of said driving tube.

3. The lock engaging-and-disengaging mechanism as claimed in Claim 2, wherein said rotatable component further comprises an axial opening formed on said second end thereof.

4. The lock engaging-and-disengaging mechanism as claimed in Claim 3, wherein said rotatable component further comprises an arcuate slot formed on a tube wall of the second end thereof, said arcuate slot communicating with said axial opening.
5. The lock engaging-and-disengaging mechanism as claimed in Claim 4, further comprising a connecting part for installation into the axial opening of said rotatable component, said connecting part comprising a pin provided to a wall thereof, said pin extending into the arcuate slot of said rotatable component, said connecting part comprising a thru hole into which an operating component of a lockset can be inserted, such that said connecting part is capable of rotating said rotatable component after being rotated for a preset angle by the operating component.
6. The lock engaging-and-disengaging mechanism as claimed in Claim 2, wherein said axially sliding component further comprises a guiding surface shaped with an inclining surface around the outer peripheral wall at the first end thereof for pushing the sideway component in the hole of key driven tube to move laterally until the sideway component partly engages with tapering hole/recess to engage the key driven tube with the outside driving tube.